

Abstract

The invention relates to a support structure for a retractable and extendable flap (12) associated with an object (14), surrounded by a flowing fluid, comprising a shell profile (16) that has a fluid/aerodynamic low-drag form on the outer side and on the inner side forms a chamber (18) for at least partially receiving a device (20) for retracting and extending the flap (12).

(Fig. 1)

Reference Character List

|    |  |
|----|--|
| 10 | Support structure  |
| 12 | Flap or landing or trailing-edge flap  |
| 14 | Object or mainplane of an aircraft   |
| 16 | Shell profile  |
| 18 | Chamber or volume or installation space  |
| 20 | Device for retracting or extending the flap                                    |
| 22 | Front shell of the shell profile   |
| 24 | Rear shell of the shell profile  |
| 26 | Direction of flow of the fluid   |
| 28 | Mounting points on the object or mainplane                                     |
| 29 | Front and rear force introduction rib  |
| 30 | Separation line or separation point between the front shell and the rear shell |
| 32 | Front area of the front shell  |
| 34 | Outer shell  |
| 36 | Closing cover  |
| 38 | Opening(s)   |
| 40 | Cover  |
| 42 | Side wall  |
| 44 | Rear area of the front shell   |
| 46 | Inner wall of the front shell  |
| 48 | Longitudinal axis of the front shell   |
| 50 | Intermediate wall of the front shell   |
| 52 | Kinematic guiding device or kinematic device                                   |
| 54 | Driving device or actuator system  |
| 56 | Guide rail   |
| 58 | Roller carriage  |
| 60 | Connecting element   |
| 62 | Rotary bearing   |
| 64 | Control lever  |
| 66 | Rotary bearing   |
| 68 | Rotary bearing   |
| 70 | Driving element or actuator  |
| 72 | Drive rod  |

|    |  |
|----|--|
| 74 | Rotary bearing                             |
| 76 | Rotary bearing                             |
| 78 | Rear spar of the mainplane of the aircraft |
| 80 | Rotary bearing.                            |